

Lesson 2 Bacteria.notebook

<https://www.youtube.com/watch?v=pcXdfotLqj0>

Kingdom Archaeobacteria and Eubacteria (formerly known as Monerans) Read pgs. 471 - 477

do the following

Explain the 1 main characteristic that separates Monerans from all other organisms.

they are prokaryotic - have DNA/RNA but not in a nucleus

Bacteria (previously known as Monerans) are placed in 2 separate kingdoms. Name the Kingdoms and give characteristics of those kingdoms....(table on page 9 will help).

1. Eubacteria - largest group, live almost everywhere, * have peptidoglycan in their cells (a protein/sugar mixture)
2. Archaeobacteria - very similar but lack the peptidoglycan in their cell walls

List and describe 3 ways prokaryotes are identified.

- a. shapes: bacilli (rod shaped), cocci (spherical), spirilla (spiral)
- b. cell walls - see question 2 from above
- c. movement - some don't move, some have flagella, some spiral forward, some glide along a slime like substance they secrete

Define: Chemoheterotroph: take in carbon and nutrients for energy (like us)

Photoheterotroph: photosynthetic but still need a source of carbon (like Venus flytrap)

Photoautotroph: use light to produce needed energy (photosynthesis)

Chemoautotroph: use chemicals to produce their own energy/food

Obligate Aerobe: must have O_2 to live

Obligate Anaerobe: dies in the presence of O_2

Facultative Anaerobe: can live with or without O_2

Explain the difference between binary fission and conjugation.

Binary fission - asexual reproduction

1 cell duplicates its genetic material

elongates itself

divides into 2 new cells exactly the same as the first cell

<http://www.youtube.com/watch?v=gEwzDydcIWc>

Conjugation - not true sexual reproduction because **no new cell is created**

1 cell transfers DNA to another cell via a bridge that forms between them

does create some genetic differences.

<http://www.dnatube.com/video/12232/Bacterial-Conjugation-Animation>

List and describe ways bacteria are helpful to humans.

decomposers

in food

help with digestion

in medicine production

in milk production

body has good bacteria that fight bad bacteria

help clean up oil spills